## REMARKS

The present Amendment has been filed along with a Request for Continued Examination pursuant to 35 C.F.R. §1.114.

Claims 1-9 are pending. No claims have been allowed.

The Examiner rejected Claims 1-9 under 35 U.S.C. §103 as being obvious in view of U.S. Patent No. 6,340,640 to Nishimoto et al. ("Nishimoto et al. '640").

Nishimoto et al. '640 discloses a method of producing a silicon substrate by dipping same in a solution including "a 50% hydrofluoric acid, a 69% nitric acid and a 85% phosphoric acid in the proportions of 12 parts by volume, 1 part by volume and 12 parts by volume for a time to obtain a predetermined amount of etching while the mixed solution is maintained at the room temperature." (col. 6, lines 6-12). In another embodiment, rather than phosphoric acid, a carboxylic acid, preferably a carboxylic acid having a carbon atom number of about 3 to 6, may be used. (col. 7, line 64 through col. 8, line 4). The third acid component, *i.e.*, the phosphoric acid or carboxylic acid, is described as an "adjusting agent" throughout the disclosure of Nishimoto et al. '640, wherein the amount of adjusting agent added is inversely related to the observed etching rate as shown in Fig. 1 and discussed at col. 7, lines 10-22 "so that the treatment can be conducted stably under easy administration of time with good reproducibility". (col. 7, lines 17-19). In another embodiment, "it is suitable that a 50% hydrofluoric acid is from 10 to 50 parts by volume per part of a 69% nitric acid. (col. 7, lines 3-6). In further embodiments, a non-ionic surface active agent may be added to the etching solution; however, the etching solution still includes the foregoing acid components including a 50% hydrofluoric acid, a 69% nitric acid and a 85% phosphoric acid in the proportions of 12 parts by volume, 1 part by volume and 12 parts by volume, which solution is kept at room temperature. (*See* col. 8, lines 54-62 and col. 9, lines 38-46).

Independent Claim 1 calls for a method for texturing surfaces of silicon wafers comprising the steps of dipping the silicon wafers in an etching solution of water, concentrated hydrofluoric acid and concentrated nitric acid and setting a temperature for the etching solution, wherein the etching solution consists essentially of, in percent, 20% to 55% water, 10% to 40%

concentrated hydrofluoric acid and 20% to 60% concentrated nitric acid and the temperature of the etching solution is between 0 and 15 degrees Celsius.

Applicants respectfully submit that independent Claim 1 is not obvious in view of Nishimoto et al. '640 for at least the following reasons.

Independent Claim 1 calls for a method for texturing surfaces of silicon wafers, including the step of dipping the wafers in an etching solution which consists essentially of, in percent, 20% to 55% water, 10% to 40% concentrated hydrofluoric acid and 20% to 60% concentrated nitric acid. As discussed in MPEP § 2111.03, the transitional phrase "consisting essentially of" limits the scope of the claim to the specified materials and steps and those that do not materially affect the basic and novel characteristics of the invention. Thus, the etching solution called for in independent Claim 1 encompasses water, concentrated hydrofluoric acid, concentrated nitric acid, and any other materials that would not materially affect the basic and novel characteristics of the invention.

By contrast, the etching solution disclosed in Nishimoto et al. '640, while including water, concentrated hydrofluoric acid, and concentrated nitric acid, additionally includes an "adjusting agent" which is disclosed as either phosphoric acid or carboxylic acid. The "adjusting agent" is disclosed as being necessary to adjust the etching rate "so that the treatment can be conducted stably under easy administration of time with good reproducibility". (col. 7, lines 17-19). Nishimoto et al. '640 fails to disclose, teach, or suggest an etching solution which does not include such an "adjusting agent". Thus, Nishimoto et al. '640 fails to disclose an etching solution *consisting essentially of* water, hydrofluoric acid, and nitric acid.

Second, Nishimoto et al. '640 fails to disclose an etching solution which includes 20% to 55% water, 10% to 40% concentrated hydrofluoric acid and 20% to 60% concentrated nitric acid, as called for in independent Claim 1. In independent Claim 1, the substantial overlap of the recited percentages of 10% to 40% concentrated hydrofluoric acid and 20% to 60% concentrated nitric acid indicate that these components are present in substantially similar amounts, with the recited ranges indicating that slightly more concentrated nitric acid is present in most instances.

By contrast, the etching solution of Nishimoto et al. '640 includes a concentrated hydrofluoric acid and a concentrated nitric acid present in the amounts of 12 parts by volume to

1 part by volume, respectively (col. 6, lines 6-12) or in another embodiment, discloses that it is also "suitable that a 50% hydrofluoric acid is from 10 to 50 parts by volume per part of a 69% nitric acid" (col. 7, lines 4-6). In other words, the amount of concentrated hydrofluoric acid is at least 10 times greater than the amount of nitric acid in the etching solutions of Nishimoto et al. '640, and Nishimoto et al. '640 does not teach any reasons why one of ordinary skill in the art would modify the relative amounts of these components. Thus, one of ordinary skill in the art would not be motivated to decrease the relative ratio of concentrated hydrofluoric acid to concentrated nitric acid to arrive at the amounts which are called for in independent Claim 1.

Third, Nishimoto et al. '640 fails to disclose a method for texturing surfaces of silicon wafers including the step of dipping silicon wafers in etching solution that is between 0 and 15 degrees Celsius. By contrast, in each embodiment, the etching solutions of Nishimoto et al. '640 are "maintained at the room temperature". (*See* col. 6, lines 11 and 12; col. 8, lines 58-62; and col. 9, lines 44-46). One of ordinary skill in the art would know that "room temperature" means a temperature of approximately 68-77 degrees Fahrenheit, which is 20-25 degrees Celsius, higher than the range of between 0 and 15 degrees Celsius called for in independent Claim 1.

For at least each of the foregoing reasons, independent Claim 1, as well as Claims 2-9 which depend therefrom, are not obvious in view of Nishimoto et al. '640.

It is believed that the above represents a complete response to the Official Action and reconsideration is requested. Specifically, Applicants respectfully submit that the application is in condition for allowance and respectfully request allowance thereof.

In the event Applicants have overlooked the need for an additional extension of time, payment of fee, or additional payment of fee, Applicants hereby petition therefore and authorize that any charges be made to Deposit Account No. 02-0385, Baker & Daniels.

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Should the Examiner have any further questions regarding any of the foregoing, the Examiner is respectfully invited to telephone the undersigned at (260) 424-8000.

Respectfully submitted,

Adam F. Cox
Registration No. 46,644

Attorney for Applicants

AFC/mt

BAKER & DANIELS LLP
111 East Wayne Street, Suite 800
Fort Wayne, IN 46802
Telephone: 260-424-8000
Facsimile: 260-460-1700

CERTIFICATION UNDER 37 C.F.R. 1.8(B)

I hereby certify that this correspondence is being electronically submitted to the United States Patent and Trademark Office on: October 16, 2006

ADAM F. COX, REG. NO. 46,644
Name of Registered Representative

Signature

October 16, 2006
Date